Patent

Docket No.: 58079US004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

in to Application of.								
Tatsuo Fukushi								
Serial No.: 10/659877	Group Art Unit: 1713							
Filed: September 11, 2003	Examiner: Henry S. Hu							
For: FLUOROELASTOMERS WITH	2101117 0, 210							
IMPROVED PERMEATION								
RESISTANCE AND METHOD FOR								
Making the Same								
AFFIDAVIT UNDER 37 C.F.R. 1.132								
AFFIDAVIT OF DR. WERNER M. GROOTAERT								
STATE OF MINNESOTA)								

) ss.

1

Werner M. Grootaert, being duly sworn, deposes and says:

COUNTY OF WASHINGTON

In to Application of

I.

- 1. That I received a Licenciate in Science from the State University of Gent, Belgium, in 1980.
- 2. That I received a Doctorate Degree in Chemistry from the State University of Gent, Belgium, in 1986.
- 3. That from May, 1986 to the present, I have been employed by 3M in Antwerp, Belgium, subsequently at 3M in Maplewood, Minnesota, and by Dyneon, LLC.
- 4. That I currently hold the position of Lead Senior Specialist with Dyneon LLC.
- 5. That I am a named inventor on U.S. Patent No. 6,730,760 B2 issued May 4, 2004.

- 6. That in order to evaluate the materials similar to the subject matter of the '760 patent, I instructed others to measure the TR-10 of several fluorocarbon polymer compounds. The TR-10 was measured according to ASTM D 1329-88 (Re-approved 1998) with ethanol as the cooling media.
- 7. That the following data correspond to samples of fluorocarbon polymers similar in composition to those described in the '760 patent. I instructed others to measure the TR-10 of several fluorocarbon polymer compounds. The TR-10 was measured according to ASTM D 1329-88 (Re-approved 1998) with ethanol as the cooling media. For reference, the monomer compositions of the fluorocarbon polymers described in Examples 4, 5, and 7 are also provided in the table.

Sample		LM9/688	LM9/692	LM9/693	LM9/701	Example	Example	Example
ID						4	5	7
Relative	TFE	71.5	73	74.1	67.7	73	68	78
Monomer								
Content ¹								
	MV31	20.4	18.8	17.9	19.5	17	19	21
	PMVE	8.1	8.3	8	12.8	9	12	W-100
************************	CSM ²	1	1	1	1	1	1	1
Tg (°C)		-20	-18	-19	-20	-16	-19	-20
TR-10		-15.4	-16	-12.9	-15.1	Not	Not	Not
(°C)						Measured	Measured	Measured

¹ Measured by FT-NMR, reported in mol %

² Relative amount of cure site monomer fed into reactor (CSM was bromotrifluoroethylene)

8. That to the best of my knowledge and belief, based upon the data provided in this affidavit, none of the Examples described in the '760 patent have the characteristics such that upon vulcanization the resulting compound would be expected to have a TR-10 of -25°C or less.

Further affiant saith not.

Printed Name: Werner M. Grootaert

Signature:

Subscribed and sworn to before me this 3rd day of February, 2006.

Nothery Public